

# “To what end is nature?” — Rachel Carson’s *Under the Sea-Wind* and Environmental Literature

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## Introduction

No biographical information about Rachel Carson can fail to mention the significant number of categories that describe her working life: she is referred to as an academic, a scientist, a marine biologist, a naturalist, an environmentalist, a journalist and, less often, a nature writer. Carson’s biographer, Linda Lear, labels her as a “biologist-writer-ecologist” (“Rachel Carson’s Biography” n.pg.). Actually, Carson worked in the U.S. Fish and Wildlife Service (formerly, between 1935 and 1952, the U.S. Bureau of Fisheries) for fifteen years, first as a radio scriptwriter, and later as an aquatic biologist, scientific writer, editor, and editor-in-chief of that service’s publications (Lear, “Rachel Carson’s Biography” n.pg.), resigning only after the success of *The Sea Around Us*, published in 1951. She devoted her life to the study of nature and, more particularly, to sea life, becoming increasingly aware of the negative impact of human action on the natural environment.

Although the whole body of Carson’s writings<sup>1</sup> reflects her love of nature and her lifelong commitment to its preservation, *Silent Spring* (1962) is her best remembered book. By addressing the poisonous effect of the overuse and misuse of pesticides, namely DDT, on living species, *Silent Spring* not only drew public attention to environmental issues in an unprecedented way but also called for political action.<sup>2</sup> The book is often

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<sup>1</sup> Carson’s publications include *Under the Sea-Wind* (1941), *The Sea Around Us* (1951), *The Edge of the Sea* (1955), *Silent Spring* (1962), and *The Sense of Wonder* (1965 – posthumous publication).

<sup>2</sup> Following the overwhelming impact of *Silent Spring*, President Kennedy’s Science Advisory Committee drew a report whose recommendations led to legislation limiting the use of pesticides (Friedman 7).

considered as the herald of the environmental movement in the United States<sup>3</sup> (Clark 77).

Because of its far-reaching impact, *Silent Spring* rather overshadowed Carson's previous writings, even if *The Sea Around Us*, published more than a decade earlier, was popular enough<sup>4</sup> to provide her with financial independence and to bring *Under the Sea-Wind*, her first book, to renewed public attention. The first of a trilogy that maps out sea life in a detailed, scientific way, the book did not arouse much interest at the time of its publication in 1941 — a fact that Linda Lear, in the "Introduction" to a recent edition of the book, ascribes mainly to its coexistence with World War II (ix). Furthermore, this was a time still far from the protesting mindset of the sixties, when the upsurge of civil rights movements was far more in keeping with the critical tone of the writer's masterpiece than when *Under the Sea-Wind* was first published. However, *Under the Sea-Wind* provides two keys to appreciating Carson's full body of work: it already sets out Carson's attitude towards nature, which, with great consistency, pervades all her life and work, paving the way for environmental awareness through literary work; and, from the perspective of literary studies, its specific writing characteristics, namely in terms of style and of narrative development, are themselves worth attention, as they illustrate the literary character of a text whose subject matter is mainly scientific and non-fictional.

This essay thus aims to show the importance of *Under the Sea-Wind* as environmental literature as it bridges the gap between scientific language and literariness. On the one hand, Carson provides therein information to teach the reader about the diversity, richness, and laws of the natural world, thereby calling forth a rational response in terms of environmental awareness; on the other hand, she conveys scientific

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<sup>3</sup> Concerns about the environment had been addressed earlier, for example with Conservationism, which, under Theodore Roosevelt's office, aimed at the wise and efficient use of natural resources. However, post-war industrial and economic development, together with the boom of American prosperity, soon overshadowed this emerging trend (Clifford 37).

<sup>4</sup> *The Sea Around Us* was awarded the 1952 National Book Award for Nonfiction.

information by means of a narrative structure and, thereby, makes the text more reader-friendly, while the use of literary devices creates an aesthetic effect. The originality of Carson's style in *Under the Sea-Wind* contributed to the development and the characteristics of environmental literature. Indeed, the defining features of her initial work have become an important dimension in the study of that body of literature.

### 1. Towards a conceptual framework

Carson's works are all linked by their attention to nature, both as subject-matter and as worldview. The titles of her books all relate to the natural world, either explicitly (*Under the Sea-Wind*) or more implicitly (*The Sense of Wonder*).<sup>5</sup> We might therefore consider them nature writing. However, even if it is undeniable that the natural world is central to nature writing, the idea of nature appears somewhat restrictive from a modern-day standpoint, as Clark argues, since not much is left untouched by human activity. Hence, the word "environment" is more comprehensive and fitting (6). Actually, as Clark further claims, the environment "is, strictly, everything" (85). This broader sense of "environment" over "nature" acknowledges man's role in nature and his ways of interacting with it and changing it and has led many to prefer the term "environmental writing" to "nature writing". Still, this distinguishing trait is implicit in most uses of the concept "nature writing", especially when taken as a genre, as I shall return to later in the essay. On the other hand, it accounts for the interchangeable use of "nature writing" and "environmental writing", as Clark, for example, does (6). Throughout this essay, I will use these terms in accordance with these perspectives.

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<sup>5</sup> The expression "sense of wonder" is used by Lyon to refer to nature writing in general, and more specifically as a trait of American cultural identity: "The literary record time and again displays the claim that there is a lifting and a clarifying of perception inherent in this refocusing, which opens up something like a new world. The sense of wonder conveyed is perhaps very much in the American grain; it may eventually be seen as a more important discovery beyond the finding of new lands" (281).

Lawrence Buell's seminal work *The Environmental Imagination* (1995) relies on a similar lexical proximity of both terms, as its title already suggests. The concept of "environmental imagination" applies, according to Buell, to literary non-fiction (2), and an "environmental" text complies with the following criteria: a) presence of the non-human environment, both as a framing device and as a presence suggesting the implication of human history in natural history; b) the human interest is not the only legitimate one; c) human accountability for the environment is connected to the ethical perspective of the text; and d) there is some implicit sense of the environment as a process (7-8). Buell's study focuses on Thoreau's *Walden* as a canonical work in American nature writing, a landmark in the way western sensibility operates in its homocentric culture and proceeds towards an environmental response (23). In terms of genre, Buell considers environmental writing hybrid and polyphonic (397).

In his well-known classification of American nature literature, Thomas Lyon also makes an introductory note pointing out the fact that the categories he proposes often blur. He states that "nature writing is not in truth a neat and orderly field" (276). Hence, Lyon's taxonomy, as he himself states, illustrates the diversity of the genre and offers an organized classification of its characteristics, but does not aim for it to become an exclusive, accurate pattern when studying the genre (281). For Lyon, nature writing can be divided according to three main dimensions: natural history information, personal responses to nature, and philosophical interpretation of nature. It is the way these aspects interact and the relative weight of each one that accounts for the following categories: Field Guides and Professional Papers; Natural History Essays; Rambles; and, grouped under the heading "Essays on Experiences in Nature", what can be considered as sub-groups: Solitude and Backcountry Living, Travel and Adventure, Farm Life, and Man's Role in Nature (278). In this "Spectrum of American Nature Writing", *Walden* is listed under Solitude and Backcountry Living, while Rachel Carson's *The Sea Around Us* falls into Natural History Essays. The latter is defined by Lyon as "expository descriptions of nature (...) fitted into a literary design, so that the facts then give rise to some sort of meaning or interpretation" (277). The appropriateness of this consideration to *Under the Sea-Wind*, which Lyon has left out of his taxonomy, will be discussed later in this essay.

Finch and Elder, who compiled a number of sample texts in *The Norton Book of Nature Writing* (1990), including Carson's *The Marginal World* (first published in *The Edge of the Sea* in 1955), maintain that nature writing adds characteristics of the literary text, in terms of language and style, to factual descriptions (25). This aspect is particularly relevant to the analysis of *Under the Sea-Wind* that I propose in the next sections.

Considering the perspectives mentioned above, it is important to bear in mind the common aspects they share, such as: the comprehensive meaning of "nature writing", the inclusion of the idea of man and his relation to nature in the concept of "environmental writing", the interchangeability of both terms (despite that distinguishing trait), and the literary, though non-fictional, character of the genre.

The name and works of Rachel Carson have been included in anthologies of American nature writing, for example John Elder's *American Nature Writers* (1996), Finch and Elder's *The Norton Book of American Writing* (1990), or Lorraine Anderson and Thomas S. Edwards's *At Home on Earth: Two Centuries of Women's Nature Writing* (2002). A regular reader of Carson's books would not find it difficult to classify them as nature or environmental writing and to acknowledge their literariness. However, while they are all centred on the concept of nature, the way it is addressed varies, particularly when it comes to style and writing strategies. In the following section, I will examine briefly how *Under the Sea-Wind* is illustrative of nature writing, for understanding how the text embodies the aforementioned characteristics of the genre (namely some sort of fusion of literary and factual elements) will be helpful to the ensuing analysis of the role of narrative as a particular and relevant aspect in this framework.

## **2. *Under the Sea-Wind* as nature writing**

In the "Foreword" to *Under the Sea-Wind*, Carson states the purpose of the book in very simple terms: to make the sea and its life a vivid reality, this based on her personal conviction that the life of the sea was worth knowing (2). This willingness to share knowledge of ocean life was determinant of the form and style of the book. Primarily concerned with the life of sea creatures, it aimed to give a comprehensive, inter-related view of the way they interact in their struggle for life and how they manage to survive.

This, broadly speaking, would place the book in the section of “natural history essays” defined by Lyon, alongside *The Sea Around Us*. In fact, *Under the Sea-Wind* provides “an expository description of nature” (Lyon 277), the relationships among the living creatures being one of the issues studied by the many sciences of natural history. Here, the scientific character of the text is a fundamental trait. First and foremost, it was planned as a scientific work, by someone who was already a biologist and zoologist deeply involved in scientific research and writings as part of her work at the U.S. Fish and Wildlife Service, as mentioned earlier. The idea to produce a complete book derived from the success of an article called “Undersea” that Carson wrote for “The Atlantic Monthly”, published in September 1937 (Lear, “Introduction” x).

Thorough research for the book was carried out for more than a year in Beaufort, North Carolina, using in-field outings and detailed observation and notes that would later be articulated in *Under the Sea-Wind*. Carson’s observation was carefully scheduled according to the sea tides and moon phases and carried out regardless of weather conditions or daily schedules. The research site chosen offered advantageous characteristics for the purposes of her study, not only because the Beaufort fisheries station was the largest research facility on the West Coast, but also due to the extensive stretch of ocean beach available (Lear, “Introduction” xiv). Her investigation encompassed a diversity of sources, as she mentions in the “Foreword”: from scientific and academic books and journal articles to scientific and semi-popular literature and even information from people with some sort of marine experience (6). To make the scientific dimension of book more understandable to every reader, Carson included a glossary of scientific and sea-related terms in the final part.

The contents and organization of the book were also based on her scientific approach; taking the sea as the unifying, ever-present element, her book is organized into three different sections covering distinct marine settings and involving different sea creatures: in section one (“The Edge of the Sea”) the shore and the sandling; in section two (“The Gull’s Way”), the open sea and the mackerel; and finally, in section three, (“River and Sea”), the deep abyss and the eel. Each particular species, however, by interacting with the others in the marine ecosystem, allows the representation of sea-life to be as wide-ranging as Carson intended.



Does this “expository description of nature”, which Lyon refers to as a trait of natural history essays, also fit into a literary design, as he also states (277)? By literary design, he means that facts are described in such a way that they will trigger “some sort of meaning or interpretation” (277). This brief reference, though crucial, falls short of the characteristics that make a text a literary one. Some of these traits, commonly shared by current literary theory,<sup>6</sup> have to do with: a) its formal features as part of the semiotic system — expressivity, delimitation and structure (Aguilar e Silva 562); b) the simultaneous correlation of content and expression, on the one hand, and the urge to communicate (Teles de Menezes 14); c) the use of connotation and the pursuing of an aesthetic formal quest, deliberately turning common language into more artistic forms of expression (15-16); d) the idea of aesthetic pleasure on behalf of the reader (20-22); e) the historical, sociological, anthropological, mythical, symbolic meanings reflected in its semantics; f) the polysemy of literary symbols (Aguilar e Silva 662). These aspects provide a useful framework to clarify the use of the term “literary text” throughout this essay, although it does not discuss each of them in detail.

To begin with, the fact that “Undersea” was first published in *The Atlantic Monthly*,<sup>7</sup> a quality literary magazine of national reputation, already suggests Carson’s skills as a writer as well as the potential of the issue addressed. Her writing talent, Lear argues, was also one of the factors that prompted her rising career within the U. S. Fish and Wildlife Service (“Introduction” xiii). And Carson herself intended to stray away from the purely scientific, by following the example of the English writer Henry Williamson whom she most admired (xii). Williamson’s writings cover a significant range of fields and genres, which accounts for his being described as a “soldier, writer, broadcaster, naturalist, farmer and, above all, visionary writer” by The Henry Williamson Society, a literary and charitable society

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<sup>6</sup> Russian formalism contributed decisively to literary studies, most notably in the field of literary genres, narratology, and the concept of literariness, which emphasised the specific character of the language of the literary text (Paz and Moniz 86; Onega and Landa 23-24).

<sup>7</sup> Renamed *The Atlantic* from 2001 onwards.

dedicated to the study of the writer's life and works (Williamson, "A Writer's Work" n. pg.). Still, his most famous and prestigious book was *Tarka the Otter* (1927), a description of the life of a male otter in the rivers Taw and Torridge and surrounding areas, in North Devon. *Tarka the Otter* is classified as nature writing ("A Life's Work" n. pg.) but its detailed scientific content relies on a story-telling narrative pattern. *Under the Sea-Wind* is also built on the inter-relation of scientific information and narration. According to Lear, the general structure that Carson first envisaged for her work was somewhat inspired by the manner of Williamson (xii). This stage corresponds to the creation of the *fabula* (fable), the general organisation, both chronological and causal, of the events in a story, defined by Russian formalists as opposed to the concept of plot, which, in turn, applies to the aesthetic representation of such events (Reis and Lopes 157). Again, this particular aspect of narrative correlates with the very notion of literary text and is worth mentioning because of the importance of narrative in *Under the Sea-Wind*, as I will discuss below.

Buell's definition of an environmental text is also important when considering this point because it is defined primarily as a literary text; but the criteria he suggests also fit *Under the Sea-Wind*: the most obvious condition is the presence of non-human environment, given that all the narrative takes place in a natural environment, the sea. Other characteristics pointed out by Buell also entail the relation with the human being, namely his interference in the natural world, and the questions of the prevalence of human interest or human accountability. Although humans play a minor role in the narrative framework of Carson's book, the natural world she describes is already touched by them. As she herself states in a letter to Hendrik Van Loon,<sup>8</sup> "Nor must any other human come into it [narration] except from the fishes' viewpoint as a predator and destroyer" (qtd. in Hagood 61). The role of humans is, to whatever extent, threatening to the balance of marine ecosystems and a risk to the beauty and harmony of sea life.

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<sup>8</sup> Hendrik Van Loon was a well-reputed journalist, cultural historian, explorer and illustrator, who first showed great interest in Carson's work after reading her article "Undersea", thus prompting the writing of the complete version, *Under the Sea-Wind* (Lear, "Introduction xviii).

### 3. The power of narrative

In the letter to Hendrik Van Loon in which Carson mentions what can be considered as the *fabula* of *Under the Sea-Wind*, she already states the primary role of narrative as a device to elude more conventional, scientifically-descriptive nature writing: "(...) the entire book must be written in narrative form (...)" (qtd. in Hagood 61). The term "narrative" refers to a literary mode distinctive from poetry and drama, in the terms defined by Gerard Genette (Reis and Lopes 270), while the term "narration" applies more specifically to the process of narrative telling (247). Also important in a reading of *Under the Sea-Wind* is the meaning of "narration" as opposed to "description". In this dyad, the first term refers to events and to the way they interrelate and develop, while the second conveys more static information, be it about characters, objects, time, or place, thus interrupting the course of events (Reis and Lopes 93, 248). Whereas Carson underscores narrative and narration over description, the latter cannot be neglected, or else scientific content might be poorly supported: "*Under the Sea-Wind* is a series of descriptive narratives unfolding successively the life on the shore, the open sea, and the sea bottom" (Carson, "Foreword" 3). Still, in the same way that description is crucial to content, narrative is essential to define the structure and to complement meaning. The way narrative categories are organised and valued in the construction of *Under the Sea-Wind* is of utmost relevance for the purpose of this analysis, as they contribute decisively to shape the defining pattern of the text, making it depart from a strict scientific format while keeping its scientific content and accuracy. I will thus discuss the use of narrative categories in *Under the Sea-Wind* in more detail.

Narrative categories comprise characters, time, place, plot, narrative perspective, and type of narrator. Time and place provide the basic framework in *Under the Sea-Wind*: we know that a year's time is covered and that the sea life described includes the open sea and the deep sea, starting at a stretch of North Carolina sea coast. Still, place is particularly relevant because it is inextricably linked with facts and scientific content. Also, descriptive features are essential to define it. A good example can be seen in the opening paragraph of the first chapter, "Flood Tide":

The island lay in shadows only a little deeper than those that were swiftly stealing across the sound from the east. On its western shore the wet sand of the narrow beach caught the same reflection of palely gleaming sky that laid a bright path across the water from island beach to horizon. (6)

This initial excerpt articulates elements from physical landscape and even geographical reference (island, shore, east, western, beach, water) with adjectives and adverbs (wet, narrow, palely, gleaming, bright). These have a dual function: for example, whereas “narrow” gives more specific, though objective, information, “palely gleaming” conveys an aesthetic effect which also discloses further information, about the time of the day.

Throughout the whole book, all the elements that depict physical space contribute to the in-depth representation of the sea, and because all living creatures are part of it, Carson eventually admits to the sea being itself a character:

In planning the book I was confronted at the very outset with the problem of a central character. It soon became evident that there was no single animal (...) that could live in all the various parts of the sea I proposed to describe. That problem was instantly solved, however, when I realized that the sea itself must be the central character whether I wished it or not; for the sense of the sea, holding the power of life and death over every one of its creatures from the smallest to the largest, would inevitably pervade every page. (“Foreword” 3)

This sort of considerations reveals Carson’s awareness, from the beginning, of concepts from the realm of narratology. The next example links her option as regards characters with that of the narrative point of view: “The fish and the other sea creatures must be central characters and their world must be portrayed as it looks and feels to them — and the narrator must not come into the story or appear to express an opinion” (qtd. in Hagood 61).

Such choices, early considered, are extremely important, for the combination of character and narrator’s point of view will enable scientific accuracy through an aesthetic, literary device. In other words, the narrative point of view relies on a third-person, omniscient narrator — a crucial

requisite to convey all the facts that inform the book. In point of fact, and unlike fictional narrative, the portrayal of the characters' world is made possible because of Carson's own investigation and field observation so that here the narrator's knowledge overlaps with that of the scientist.

Also, the narrator's omniscience covers all characters, because they are all equally important to the comprehensive content displayed. The information given, in all its details, aims to represent the atmosphere of the sea, as Carson also says ("Foreword" 3), as well as to give a thorough picture of all the interrelations and the complex tapestry that underlies the cycles of life and death in such a gigantic habitat (Lear, "Introduction" xii). To accomplish that scientific credibility, facts have to be objective, thus excluding all personal, subjective commentary by the narrator, as she explains: "(...) the reader is an observer of events which are narrated with little or no comment" ("Foreword" 3-4). Here, and again, Carson emphasises events (the plot, in terms of narrative category), a core trait of narrative, even if they are consistently supported by description, as shown above.

As far as characters are concerned, their identity, characteristics, and interactions are related with their specific habitat, as the summary of the book structure suggests, but they too comply with an implicit duality, brought together in the narrative: the characters in *Under the Sea-Wind* are all the species dwelling in it, but the main types are transformed into individual living beings, given an identity and a proper name, thus testifying to the writer's intention of creating a text that would give scientific information, while also resembling a fictional one. Proper names appear capitalized and in singular form and derive either from physical characteristics, as is the case with the sandling (Blackfoot and Silverbar), or from the very scientific names of the species they represent, as happens with Scomber, the mackerel (*Scomber scombrus*) and with *Anguilla*, the eel (*genus Anguilla*, a type of eel). There are further examples: Rynchops, the black skimmer, Pandion, an osprey, Cynoscion, a trout, Lophius, the angler fish, to cite but a few.

A crucial category of narrative, a character conveys meaning or even embodies it not only through proper name, but also by means of characterization and speech (Reis and Lopes 316). Because the characters in *Under the Sea-Wind* are real animals, they are deprived of speech, and

characterisation is limited to physical traits and behaviour, which, in turn, deeply correlate with the plot. Carson, however, makes up for these restrictions by selecting language that brings them closer to human feelings or condition, for example: "Of all the food of the tide zone they loved best these small, egg-shaped crabs" (25), or "Like the older sanderlings, Silverbar had changed her winter plumage of pearly grey for a mantle heavily splashed with cinnamon and rust, the colours worn by all sanderlings on their return (...)" (25). This regular pattern throughout the whole book relies on the ambivalence of the chosen words, as if "love" or "wear" actually express the animals' feelings or conscious decision to do something.

For Lear, this narrative strategy was a means to make characters more real and their behaviour more understandable for readers. To achieve such a purpose, characters were given certain human traits or expressions, which would not be acceptable in a purely scientific text. Even so, Lear considers that coming this close to anthropomorphism, though risky, does not affect negatively the representation of the animal world ("Introduction" xvii).

Observing the behaviour of sea animals indeed allowed the writer (and scientist) to represent it in narrative. In line with Lear's reflection, the process is explained by Carson herself. Unable to know the feeling of fear in a fish, she infers from the way he acts that he is fearful: "[a fish] behaves as though he were frightened. With the fish, the response is primarily physical" ("Foreword" xvii).

In any event, this sort of character may fall into the broader classification introduced by structuralism, namely with Propp and Greimas, who extended the category beyond human beings, thus taking in animals or abstract ideas. In light of this, the new word "actant" (Reis and Lopes 18, 315-6) that Greimas borrowed from Tesnière applies to the one who does the action or is affected by it (18), a concept that seems to fit the living creatures in *Under the Sea-Wind*. Furthermore, the idea of internal verisimilitude that Russian formalism proposed for the study of characters is in keeping with the development of events in Carson's narrative, for this theory highlights how the character's actions (whatever entity that character might be) rely on the web of interrelations that connect it (or him or her) to all the other characters (Reis and Lopes 316). In light of biology studies, this is what happens in any ecosystem where struggle for life depends on the interrelation of all beings, in terms of food, habitat/shelter or repro-

duction, for example — the central point often stated by Carson herself when describing *Under the Sea-Wind*. Here, the lives of characters are narrated over the course of the book in terms of their interaction with the environment, which obviously includes all other living beings there. Carson herself considers this account of the sea creatures' lives as biographies: "I have written the biography of a mackerel, beginning, as biographies usually do, with the birth of my central character" ("Memo to Mrs. Eales" 58) Hagood also uses the term "biological biographies" (61). The animals' life paths are narrated with all the typical landmarks: birth, growth, struggle for survival, reproduction and death, a representative part of the more wide-ranging "biography of the ocean" which, in Lear's words, defines the body of Carson's writings (Lear, "Rachel Carson's Biography" n. pg.).

Such types of characters, no matter the narrative strategies mentioned above, rely most heavily on another category, plot, which is, again, deeply connected with space. Events are biographical, shaped by time, place and all characters, but telling them through past tenses is an important device in *Under the Sea-Wind*. Grammatically, the present simple tense is usually used to describe scientifically evident facts, such as the ones presented in *Under the Sea-Wind*. This tense often implies a repetitive pattern, consistent enough to allow for scientific generalizations and conclusions. However, even if scientific truth constitutes the backbone of the story, Carson rejects the use of the present and replaces it with past tenses. As with proper names, she intends to make her story seem unique, as if what she is telling had happened only once. Using past forms (simple, perfect, continuous) marks the tone of the text, giving it an air of fiction and the format of story-telling, both much more effective in capturing the reader's attention and bringing him closer to the heart of sea life: "About the time the tide was midway to the flood, a wave of motion stroked the tops of the grasses above the terrapin egg bed, as though a breeze passed, but there was little wind that night. The grasses above the sand bed parted" (*Under* 14).

Literary theory defines style as the writer's characteristic way of saying things, through a particular choice of words, rhetorical devices and structure (Cuddon 922): Carson's style in *Under the Sea-Wind* is achieved through the blurring of narration and description, but her use of language goes further into literary features, for example by making use of images and rhetorical devices such as images or metaphors ("(...) [the skimmer]

(...) bringing his dark form into strong silhouette against the gray sheet (...), "(...) the whisper song of the water (...)" (*Under* 9), "soft tinkling sounds" (12), "the steep face of the rock was green with the soft fronds of mosses that grew where their leaves escaped the flow of water (...)" (133). Interestingly, though, these typical devices serve a dual purpose: creating an aesthetic effect (one of the traits of the literary text, as mentioned earlier),<sup>9</sup> and providing information that is as complete as possible.

That she opted for narrative as a common bond that interweaves all other elements in the narrative, be it scientific or literary, suggests Carson's will to make the book readable to a larger and more diverse public of readers than a strictly scientific book might be. From an aesthetic perspective, narrative appears as a powerful weapon to convey information — story-telling being, from the beginning of times, an effective means of communicating, teaching and learning, as *Genesis* or folk tales notably account for (Reis and Lopes, 80, 83-5). At the time of its publication, this merit was overlooked and the much acclaimed *The Sea Around Us* follows a diverse pattern. Although rich in language and style, it is clearly a scientific book.<sup>10</sup> At a time when environmental concerns were barely felt, the potential of Carson's innovative endeavor was not valued and its pedagogical, democratizing role was only recovered years later. "To what extent?" is a question that still invites some reflection.

#### 4. "To what end is nature" (writing)?

Using a literary style to convey information from natural history helps define Carson's personal response to nature. Although it derives firstly from observation and scientific investigation, it is also, to a great degree, shaped by the sense of wonder that nature inspired in her and which,

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<sup>9</sup> In section two, characteristics of a literary text.

<sup>10</sup> The opening paragraph of *The Sea Around Us* already makes this clear: "Beginnings are apt to be shadowy, and so it is with the beginnings of the great mother of life, the sea. Many people have debated how and when the earth got its ocean, and it is not surprising that their explanations do not always agree (...)" (9).



not accidentally, became the title of her last book, published posthumously, in 1965.<sup>11</sup>

Threats to the beauty and to the balance of the natural world are more openly addressed in Carson's ensuing works, but the references to human action or mere existence in *Under the Sea-Wind*, though minor, always account for some sort of deviation from the otherwise natural course of events. Struggle for survival may become even harder, whenever sea animals encounter human beings or their artifacts, for the most part related to fishery or construction, for example when fish get caught in nets set by fishermen (14) or when some sort of concrete construction, for example a dock, interferes with their movement (12).

As pointed out earlier, in terms of classification, this specific trait allows *Under the Sea-Wind* to be considered an "environmental text", according to Buell's definition, which not only intertwines human history and natural history, but also suggests human accountability and the idea that the interest that humans have is not the only legitimate interest (Buell 7). In Carson's book, this idea that the human interest is not of predominant importance is implied in the very "*fabula*", concerned as it is about sea creatures and their lives. Human responsibility, however, is not portrayed in clearly critical terms. Instead, it is shown to the reader through objective evidence. No criticism is expressed, because as Carson herself stated, all is narrated as if from the point of view of the animals and based solely on their behavior (Lear, "Introduction xvii). Equally important is what this narrative point of view contributes in terms of environmental significance. By pointing out that human presence is reported in the narrative solely as seen from the fishes' viewpoint, as predator and destroyer (Hagood 61), she suggests man's equal role to all other marine species in the food chain. Shoko and Shiori, in an article about Rachel Carson and nature writing, maintain that even when human beings kill animals, they do it as predators just like any other species, being considered on equal terms with all living creatures in nature (16). However, Shoko and Shiori also argue that human intervention in this process highlights the terror or the suffering of animals in the process of being caught or killed, especially

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<sup>11</sup> *The Sense of Wonder*, New York: Open Road, 2011.

because of this being told from the perspective of the sea animals (18). Furthermore, because human beings in the story are also represented from their perspective, there is no room for open criticism (18). These considerations are substantially relevant inasmuch as they reinforce the importance of narrative viewpoint in the construction of meaning, and also because despite the fact that such a narrative device leaves out open commentary on man's role in nature, the idea that man disrupts the natural balance of the world still underlies the narration of events. Another relevant point must be added: however much Carson may have intended to suggest the equal role of human beings and other species in nature, she is obviously aware of the fact that consciousness and free will, which the first have, places them in an advantageous position in the food chain. This aspect is of utmost importance to the discussion of the environmental character of *Under the Sea-Wind*.

Relying on the sea animals' behavior to attain a sort of interpretation of its meaning has enabled some flexibility in terms of word choice. Words or expressions like "dimly remembered" (12), "love", "prefer" (15), are reliable in terms of scientific truth and of the species' narrative point of view; also, they belong to a lexical framework that applies to humans, too, thus creating a certain proximity and empathy with the reader. However, it would not be possible, for the sake of narrative verisimilitude, to accommodate open critical commentary. Even so, ecological awareness clearly underlies *Under the Sea-Wind*. According to Hagood, the fact that *Under the Sea-Wind* foregrounds "the idea of an interdependent community of living species" already hints at an ecological aesthetic, representative of Carson's ecocentric vision of the world (61). From Hagood's perspective, the effect of unity and harmony that the intertwined narrative of the three biographies in the book achieves is disrupted by human presence. This represents "a self-conscious gesture toward a new kind of nature writing" (61). In Lyon's taxonomy, what he maintains about *The Sea Around Us* applies likewise to *Under the Sea-Wind*, thus being in harmony with Hagood's thesis: "(...) [Carson] arranged the facts of oceanography and marine tellingly, so that the drama and interplay of forces pointed inescapably toward a holistic, ecological view of nature" (277). One may draw the conclusion, therefore, that objective facts and the way they are articulated in the narrative development speak for

themselves and make up for the absence of an explicit environmental speech, which would not fit with the structure of *Under the Sea-Wind*.

In addition, the acknowledgement of environmental characteristics in *Under the Sea-Wind* resonates with Lyon's taxonomy in a broader sense. As Lyon moves rightwards in his spectrum of nature writing, the categories that follow "Natural History Essays", under which he placed *The Sea Around Us*, rely on a few distinguishing traits that are worth considering, for example: (1) essays of experience, in which the writer's direct contact with nature provides the setting for the writing (279), and (2) works focused on man's role in nature, based predominantly on interpretation and falling into the scope of philosophical reflection also due to their more abstract, analytical and scholarly tone (280). *Under the Sea-Wind* may be considered an essay of experience, inasmuch as the scientific facts that provide the book content, the story plot, are based to a significant extent on Carson's first-hand contact with the sea world, through her in-field outings, observation and data-gathering. As regards the next category mentioned, works placed under "Man's role in nature", *Under the Sea-Wind* clearly departs from their formal characteristics and style, but still expresses a fundamental interrogation, that of the interaction of man and the natural world. Again, this idea converges with the reading of *Under the Sea-Wind* from an environmental perspective.

An ecocentric environmental mindset, however, may be considered as falling short of humanist concerns. Hagood points out that Carson's "ecocentric preference for the survival of species over the welfare of individual lives" (62) is one of the factors that contributed to the little success the book had when it was first published, as the socioeconomic context of the post-Depression period in America made preoccupations with man's own survival and his well-being much more poignant than that of all the other species (62). She further supports her argument with the ending of the book, where the sea in all its magnificence is bound to conquer land and civilization (62).

Nevertheless, the powerful image that has prompted this line of criticism ("and once more all the coast would be water again, and the places of its cities and towns belong to the sea" (271) invites a diversity of interpretations. The literary characteristics of the text allow an understanding of its symbolism — rather than an eschatological prediction of science-

fiction contour. The final sentence reads as a hyperbole of the beauty of the sea and of its core role in all forms of life, a claim for the preservation of sea life. In this sense, and taken from a twenty-first century perspective, this reads as a metaphor of a call for attention, all the more coherent with the purposes of an environmental text. Hagood herself comes to the conclusion that *Under the Sea-Wind* raises the issue of the significance of human life relative to the life of the ocean (62), which is in accordance with the metaphorical reading of the ending of the book that I suggest.

However, this work goes beyond “ecological literacy” (Hagood 62), for literacy refers to knowledge; but knowledge is a means to a greater end, that of making science understandable to common people. By doing so, a pedagogical effect was achieved: planting the seed of environmental awareness. As pointed out earlier, such sympathy resulted from the democratizing aesthetics on which *Under the Sea-Wind* relies. It must be noted, though, that the true environmental character of *Under the Sea-Wind* only became conspicuous in light of Carson’s ensuing books and as the natural world became progressively endangered due to human action.

When Emerson, more than a century before, asked “To what end is nature?” (1), the changes imposed on nature by man were far from being considered threatening. On the contrary, in section two of his seminal essay “Nature”, “Commodity”, he states the role of nature as “steady and prodigal provision” (7), making clear that nature is for the “profit of man” (8). Had Emerson been able to witness where that “mercenary benefit” (9) would take us to, his reflection on that particular score would probably have been different, for nature was also beauty, and beauty prompts aesthetic delight and cannot be destroyed. Hence, this fundamental, timeless idea reverberates in Carson’s thought and writings. Nature is primarily there to love and to admire. Nature writing is to spread word of it, so that it may remain lovable and admirable by human beings.

## Conclusion

Environmental literary studies developed more consistently in the mid-eighties, (Glotfelty xvii), bringing environmental awareness and concerns to the realm of literature and making this relationship, in all its diversity, the object of academic investigation. Thus, the concept of ecocriticism as

a specific field of study emerged, broadly speaking, as “the study of the relationship between literature and the physical environment” (xviii). Ecocriticism has most obviously evolved from the dramatic changes in the natural world, as a response to the growing environmental awareness that started to pervade all sectors of society, namely from the seventies onwards.

*Silent Spring* opened avenues for reflection on the role of man in nature and led to concrete action. But, more than being its predecessor, *Under the Sea-Wind* can now be read as a more relevant text from the standpoint of ecocriticism, departing as it does from a scientific framework.

In a nutshell, *Under the Sea-Wind* is a fine example of nature writing that testifies to the eclecticism and richness of the genre, depicting a view of nature based not only on knowledge, but also on love and beauty. As Lear mentions in her renowned biography of Carson, from an early age she had “a feeling of absolute fascination for everything related the ocean” (*Rachel Carson: Witness...* 8). Clearly, this aesthetic momentum prompted her search for knowledge as well the willingness to share it on a wider scale. Moreover, that beauty and knowledge form a conceptual dyad in her vision of the natural world, or even of the whole world, is a key notion to understanding Carson’s work and thought. In the “Foreword” to *Under the Sea-Wind*, this central idea is exposed in a poetic tone:

To stand at the edge of the sea, to sense the ebb and the flow of tides, to feel the breadth of a mist moving over a great salt marsh, to watch the flight of shore birds that have swept up and down the surf lines of the continents for untold thousands of years, to see the running of the old eels and the young shad to the sea, is to have knowledge of things that are as nearly eternal as any earthly life can be. (xxi)

To share her view, Carson wrote *Under the Sea-Wind* as a literary narrative: non-fictional in content, as its scientific character demanded, but relying on as many traits of a purely literary text, some of them common to fictional ones, as possible. This aesthetic embodies an environmental message, that of taking us “on a journey with the intent to change our attitudes about our relationship with the natural world”, as Lear defines the primary and common nature of Carson’s work (“Introduction” xvi). This aim is made easier by the democratizing potential of *Under the Sea-*

*Wind* to reach out to each and every one as it does, thus enhancing its pedagogical efficacy. Furthermore, from a twenty-first century standpoint, Carson's first book calls for more challenging and far-reaching uses of the story, adding her synthesis of beauty and knowledge to the realm of the more scientific and pragmatic side of environmental debate and inviting further reflection on the way sciences and humanities interact so as to face modern-day threats.

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### ABSTRACT

Rachel Carson's work is best known in the fields of marine science and environmentalism, due especially to the prominence of *Silent Spring* (1962), in which she describes the threat posed to the natural world by the use of pesticides, thus challenging American policies on environmental practices. Though lesser known, Carson's other writings are also important, not only because of their representation of nature, but also in terms of their genre and style, which attempt at merging scientific content and literary expression. This essay discusses the relevance of Carson's first book, *Under the Sea-Wind* (1941), in terms of nature and environmental writing. It considers how the book's scientific and literary aspects correlate, with particular emphasis on the writer's use of narrative. Finally, the essay also addresses the contribution of Carson's environmental aesthetics to an environmental pedagogy.

### KEYWORDS

Environmental writing; literary text; narrative; nature writing; *Under the Sea-Wind*

### RESUMO

A obra de Rachel Carson é conhecida, essencialmente, no campo da ciência (em especial, da biologia marítima) e dos movimentos ambientalistas, de que o seu livro *Silent Spring* (1962) é emblemático. Nele, a autora denuncia a ameaça da indústria de pesticidas, desafiando as políticas da época em relação a questões ambientais, nos Estados Unidos. Outros livros de Carson, embora menos conhecidos, são também relevantes, quer pela representação da natureza que oferecem, quer em termos de género literário e de estilo de escrita, buscando a fusão entre conteúdo científico e expressão literária. Neste ensaio é analisada a importância do primeiro livro da autora, *Under the Sea-Wind* (1941), no plano da escrita da natureza e ambiental. Propõe-se uma análise da correlação entre as dimensões científica e literária, com particular destaque para a utilização do modo narrativo. É ainda ponderado o contributo desta estética ambiental para uma pedagogia ambiental.

### PALAVRAS-CHAVE

Escrita ambiental; Escrita da natureza; narrativa; texto literário; *Under the Sea-Wind*

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